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E-Disclosure in International Arbitration

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E-Disclosure in International Arbitration

by ROBERT H. SMIT and TYLER B. ROBINSON*

ABSTRACT

Electronically stored documents, in particular, emails, have rapidly become perhaps the most important source of evidence in commercial business disputes of virtually every kind. In the United States, new rules of court procedure seek to address the scope and conduct of discovery of electronic documents, which present unique challenges for litigants that discovery rules and principles designed with hardcopy documents in mind are ill-equipped to address. The same issues arise for international commercial arbitration but no guidelines tailored to the unique nature of international arbitration have yet been devised. This article surveys the unique issues and problems that arise in connection with the production of electronic documents, discusses the discovery rule innovations that are taking place in the United States to address those issues and problems, and proposes guidelines for the conduct of electronic disclosure in international commercial arbitration, taking into account important differences between international arbitration and U.S. domestic litigation.

I. INTRODUCTION

IF 'DISCOVERY' is a dirty word in international arbitration, 'e-discovery' promises to be downright obscene. Information technology continues to revolutionise how people conduct business, particularly on an international scale where vast separations in time and distance can be bridged instantaneously at the click of a mouse. Electronic drafting, communication and storage capabilities have transformed the very meaning of the word 'document' and, with it, the process of document discovery in the United States and, inevitably, in international arbitration.

Courts in the United States have begun to grapple with what e-discovery means for the conduct of domestic US litigation. In particular, new amendments

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to the US Federal Rules of Civil Procedure ('Federal Rules') went into effect on 1 December 2006, which specifically address e-discovery issues.[1] In addition, an influential US think-tank known as the 'Sedona Conference' has issued widely-followed 'Sedona Principles Addressing Electronic Document Production'.[2] The same document production issues will inevitably arise in international arbitration. But the solutions may need to be different. How should we deal with e-document production in international arbitration? Do we need new rules or guidelines to address the special challenges that electronic information presents? If so, are the new approaches being developed in the United States appropriate models for international arbitration, or do the differences between document production in US domestic litigation and in international arbitration call for a different approach in international arbitration?

To date, little has been written on the topic of e-discovery in international arbitration, as though to address the topic might accelerate its unwelcome arrival in the field.

The following offers a starting point for analysis, by first, examining the difference between e-documents and paper documents that make disclosure of electronic information such an important and difficult problem; secondly, introducing how the new Federal Rules of discovery in the United States deal specifically with e-discovery issues; and thirdly, exploring whether and how e-documents should be addressed differently in international arbitration than in US domestic litigation, and proposing guidelines for the preservation and production of electronic documents in international arbitration.[3]

II. E-DISCOVERY VERSUS PAPER DISCOVERY

Electronic documents (including emails, webpages, word processing files and computer databases) differ from paper documents in several important respects relevant to the document production process.[4] First and perhaps foremost, the

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1 *See* E-Discovery Amendments to the Federal Rules of Civil Procedure and Committee Notes, available at www.uscourts.gov/rules/congress0406.html. For useful commentary on the new Federal Rules and e-discovery practices before and under these Rules, *see* Theodore C. Hirt, 'The Two-Tier Discovery Provision of Rule 26(b)(2)(B): a Reasonable Measure for Controlling Electronic Discovery?' in (2007) 13 *Rich. JL and Tech.* 12; Lee H. Rosenthal, 'A Few Thoughts on Electronic Discovery after December 1, 2006' in (2006) 116 *Yale LJ Pocket Part* 167; Howard L. Speight and Lisa C. Kelly, 'Electronic Discovery: Not Your Father's Discovery' in (2005) 37 *St Mary's LJ* 119.

2 *The Sedona Principles: Best Practices Recommendations and Principles for Addressing Electronic Document Production* (2nd edn, June 2007) (hereinafter 'Sedona Principles'), available at www.thesedonaconference.org. A copy of the second edn of the Sedona Principles is reproduced *infra*. A glossary of technical terms relevant to electronic document production is provided in 'The Sedona Conference Glossary: E-Discovery and Digital Information Management', available at www.thesedonaconference.org.

3 The authors' proposed 'Guidelines for Disclosure of Electronic Documents in International Arbitration' are reproduced *infra*.

4 Helpful references in the context of US litigation include: Sedona Principles, *supra* n. 2; American Bar Association Civil Discovery Standards, Art. VIII Technology (August 2004) (hereinafter 'ABA Civil Discovery Standards'), available at www.abanet.org/litigation/discoverystandards/2004civildiscoverystandards.pdf; and the *Manual for Complex Litigation, Fourth* (2004) (hereinafter 'MCL 4th'), s. 11.446. *See also*, Jay E. Grenig and William C. Gleisner, III, *E-Discovery and Digital Evidence* (2006).

sheer *volume* of e-documents generated is much greater than that of paper documents.[5] This is not only because e-documents are more easily created, duplicated, forwarded and transmitted than paper documents, but also because people use email to communicate things they used to communicate orally in face-to-face meetings or by telephone (sometimes, precisely to avoid creating a written record of what was said).[6] Email thus lends itself not only to more, and more casual, business communications, but also to a lasting 'written' record of those communications – which is precisely why email is such fertile ground for discovery. That which used to be said orally and fade from the memory of a witness, now may be preserved, word-for-word, in the email files of a dozen email recipients. Emails (and their attachments) can be forwarded endlessly. Email software typically saves multiple copies of an email automatically as it is sent or forwarded. As a result, the information available for e-discovery is not only more voluminous than for paper discovery, but often more interesting as well.

Electronic information lends itself not only to greater volume but also increased *dispersion* of discoverable information. Whereas a party's paper files relating to a particular transaction may typically be consolidated in one physical location (a manila file, a box, a drawer), electronic documents relevant to a matter may reside simultaneously in a number of different places (mainframe computers, network servers, personal desktop computers, laptop computers, blackberries or other hand-held devices, electronic back-up or disaster recovery storage) multiplied among many individual document 'custodians'.[7] As a result, there are more places to search for e-data potentially responsive to a document request, and it may be harder to determine where any produced e-data came from.

To greater volume and dispersion, add *durability*. Electronically stored information is a lot harder to destroy than are paper documents. A paper document can be ripped up, shredded, lost or thrown out, and will wear and tear with age and time. Electronically stored information is more durable than its physical hard copy. Indeed, 'delete' does not really mean destroy. A 'deleted' item of electronic information typically is not really gone, but rather marked by the computer to be overwritten with replacement information when the same electronic storage space becomes necessary for some other purpose.[8] In any event, most businesses maintain some form of back-up storage where 'deleted' items may reside indefinitely. Computer forensic specialists are available for hire that employ sophisticated technology and methods precisely designed to recover electronic information that once was thought to have been discarded.

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5 One CD-ROM that holds 650 megabytes of data is the equivalent of 325,000 typewritten pages. One gigabyte of data is the equivalent of 500,000 typewritten pages. A terabyte, consisting of 1,000,000 megabytes, is the equivalent of 500 billion typewritten pages. *See* MCL 4th, *supra* n. 4 at s. 11.446.

6 *See Byers* v. *Illinois State Police*, No. 99 C 8105, 53 Fed. R Serv. 3d 740, 2002 WL 1264004, at *10 (ND Ill. 31 May 2002) (noting the sheer volume of electronic information compared to paper-based discovery, as email has replaced informal messages that were previously relayed by telephone or in person).

7 *See* MCL 4th, *supra* n. 4 at s. 11.446; ABA Civil Discovery Standards, *supra* n. 4 at Art. VIII.29(a)(ii); Grenig and Gleisner, *supra* n. 4 at s. 6.8. Individuals within a client organisation in possession of relevant documents are commonly referred to as document 'custodians'.

8 *See* Grenig and Gleisner, *supra* n. 4 at s. 6.7; Sedona Principles, *supra* n. 2.

Moreover, because of its propensity toward duplication and dispersion, even if 'deleted' from one location, the same electronic information may continue to reside in any number of others. Take, for example, an email whose author wishes to destroy it. If he deletes it from the desktop 'inbox,' a copy is still probably residing in his email 'sent' box. If the author has a blackberry, the email may be stored on there as well. Even a technologically-informed user who locates and 'deletes' an email in all of its manifestations from his own custody and control, does not control the 'paper trail' generated by the email's recipients, who may include forwarded recipients the author never intended or knew about.

At the same time that electronic information is more durable than paper documents, in other respects, it is more *transient.* A piece of paper exists in physical form and can be picked up and read by anyone. Electronically stored information requires context – computer hardware and software that can read it and render it in a form that is viewable and printable. New technologies are introduced all the time, rendering yesterday's versions obsolete. Electronic information can be stored indefinitely, but the environment required to make it accessible will eventually be replaced with newer, better hardware and software that may no longer support the same format of information.

Electronic information is also *dynamic.* Paper documents, once generated, are largely static; they sit in a drawer or file, as-is. Electronic information can be edited, modified, updated, overwritten – in short, changed – with frequency and ease.[9] Oftentimes, computer drives and other storage media cause document changes automatically without any human intervention required. Many documents are stored on shared networks where they may be accessed and modified by many different people. Whereas paper documents can be preserved simply by leaving them alone, 'preservation' of electronic information may require management and proactive intervention. At the extreme, preserving all information on a computer system as it exists at a moment in time or historically over a period of time could mean halting a client's business in its tracks.

So what do the volume, dispersion, durability, transience and dynamism of electronic information mean for lawyers engaged in discovery? Obviously there are resource and cost-benefit considerations that a scale calibrated for paper discovery is unfit to measure and balance. Rules and practices developed for search, retention and production of paper documents may not always provide meaningful or appropriate guidance for search, retention and production of e-documents. For example, volume, dispersion and durability, render the collection of 'relevant documents' an ill-defined task absent appropriate regard for where and how different kinds of information might be found, in what format, and at what cost. The durability, transience and dynamic nature of electronic information present unique problems of 'production'. Is a document 'produced' if it is made available in only the last iteration in which it existed? Is it adequate to produce electronically-stored data in printed hard copy form when the electronic

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[9] *See* Grenig and Gleisner, *supra* n. 4 at s. 6.9; Sedona Principles, *supra* n. 2.

version includes embedded links and codes or other features that permits data in various fields to be searched, compared or manipulated in useful and illustrative ways? Is it sufficient to produce electronic information in a format that today's readily available computer software and hardware no longer recognise? The 'preservation' of 'relevant' documents once litigation is anticipated or commenced also requires rethinking in light of the fact that electronic information is dispersed and dynamic throughout a company's computers, rather than statically awaiting collection in a drawer. Businesses cannot function unless their computers continue to do so and 'preserving' a computer system as of a particular point in time may be impractical.

Thus, in many respects, electronic discovery appears several orders of magnitude more onerous, costly and complex than paper discovery. In other respects, however, just as technology has expanded the ability to generate, proliferate and store information, it also lends itself to organising, searching and exchanging electronic information more quickly, cheaply and intelligently.[10] Search terms can be used. Date, custodian and file-type restrictions can be applied. Identical documents appearing repeatedly throughout a company's files can be electronically 'de-duplicated'. Ever more sophisticated software can filter and organise electronic information and reduce or in some ways replace expensive attorney hours spent on document collection and review. Computers can also streamline and simplify the document production process.[11] Electronic information need not be printed out and provided to one's adversary in a cardboard box (or several thousand of them). It can be organised and produced on word-searchable disks from which only documents of interest may be printed.

The more electronically based the subjects of discovery become, the more computers can assist in the process of e-discovery. But first, the rules imposed by courts and tribunals on parties engaged in discovery need to take account of the volume, dispersion, durability, transience and dynamism that are peculiar to electronic information. Existing rules fashioned around paper discovery are not always adequate to address these new challenges and opportunities.

III. THE US APPROACH TO ELECTRONIC DISCOVERY

Recognising the limitations of discovery rules conceived in an age of paper discovery, the US federal courts introduced the new e-discovery Federal Rules,

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[10] *See* MCL 4th, *supra* n. 4 at s. 11.446 (suggesting ways in which discovery in electronic form can reduce costs and save time).

[11] *See e.g., In re CV Therapeutics, Inc. Securities Litigation*, No. C-03-3709 SI (EMC), 2006 WL 2458720, at *2 (ND Cal. 22 August 2006) (endorsing the use of electronic search terms and de-duplication to narrow the scope of production and strike a balance between the plaintiff's need for documents and defendants' burden in producing them); *J.C. Associates v. Fidelity & Guar. Ins. Co.*, No. 01-2437 (RJL/JMF), 2006 WL 1445173, at *1–2 (DDC 25 May 2006) (noting that the costs of discovery were to be considered in light of the relatively small amount in controversy and ordering the use of targeted search terms to narrow and economise the discovery process); Linda G. Sharp and Tommy Sangchompuphen, 'Electronic Discovery and Business Law Alternative Dispute Resolution' in (2004) 3(1) *Arizona Business Lawyer* 11 (noting that by filtering documents by custodian, time and date, file size, keywords, and de-duplication, parties can reduce the number of documents they need to review for production by up to 75 per cent).

applicable to all pending and future cases filed in the federal court system as of 1 December 2006.[12] In addition to the federal courts, state court systems within the United States are also at various stages of studying and adopting new e-discovery rules, including important commercial jurisdictions like New York, California and Illinois. Finally, the Sedona Conference think-tank has promulgated the 'Sedona Principles Addressing Electronic Document Production', which sets forth e-discovery principles and commentary that have proved very influential in the United States.

The new Federal Rules, state rules and Sedona Principles concerning e-discovery are really only the beginning, as they will require substantial interpretation and fleshing out by the courts that apply them in practice. Indeed, the Federal Rules were intentionally drafted using general language so that they could be applied to any source of electronic information potentially subject to discovery, including e-data systems that have yet to be invented. As computer technologies innovate at meteoric speed, application of the Federal Rules governing electronic discovery will inevitably continue to evolve.

(a) General Approach: Scope of E-Discovery

The general approach to e-discovery adopted by the Federal Rules is to apply to e-discovery the same basic standard governing the scope of ordinary discovery, but then to prescribe specific additional guidelines tailored to the special challenges of electronic documents. Thus, parties to a litigation in federal court are entitled to discover any and all electronic information, just as if it were hard copy material, provided it is 'reasonably calculated to lead to the discovery of admissible evidence' at trial.[13] Indeed, Federal Rule 34 expressly identifies 'electronically stored information' among the kinds of information one party may request another party to produce during discovery. According to the Advisory Committee Notes that accompany the new amendments and offer interpretive guidance on their meaning, discovery of electronically stored information is now 'on equal footing with discovery of paper documents'.[14]

But it is not enough to simply add 'electronic information' to the list of discoverable material. The amendments are intended to prescribe specific guidelines to address and manage the special challenges inherent in applying a broad scope of discovery to electronically stored information, while at the same time remaining 'flexible enough to encompass future changes and developments'.[15] The innovations offered

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[12] The Advisory Committee on Civil Rules of the US Judicial Conference began studying the issue of e-discovery in 1999 and drafted proposed rules that were then approved by the Judicial Conference in 2005. The proposed new Rules took effect automatically on 1 December 2006 after they were presented to the US Senate and US Supreme Court, which opted not to change or oppose them. Prior to the federal rule amendments, courts created e-discovery rules through individual case decisions, applying the existing federal discovery rules.

[13] Fed. R Civ. P 26(b)(1). *See e.g., Ameriwood Indus., Inc.* v. *Liberman*, No. 4:06CV524-DJS, 2006 WL 3825291, at *1-6 (EDMo. 27 December 2006) (applying the newly amended Federal Rules under the standard of discovery that appears 'reasonably calculated to lead to the discovery of admissible evidence').

[14] Advisory Committee Notes to Fed. R Civ. P 34(a).

[15] *Ibid.*

by the new Federal Rules include forcing parties to confer with each other and with the court at the outset of a case specifically to address and resolve e-discovery issues; balancing the benefits, burdens and costs unique to the conduct of electronic discovery; and recalibrating document retention and preservation obligations and privilege and waiver rules to fit within the modern electronic information age.

(b) Addressing E-Discovery Issues Up Front

The new e-discovery Federal Rules direct parties to address e-discovery at the outset of the case and to map out a discovery plan that takes account of it, with the input of the court as necessary to address points of disagreement. Specifically, parties must initially disclose at the commencement of a case, and without awaiting a discovery request from their adversary, a description by category and location of all electronically stored information in the possession, custody or control of the party that the disclosing party may use to support its claims or defences, unless solely for impeachment purposes.[16] Parties are further required to meet and confer at the outset of a case on any issues relating to discovery of electronically stored information, including the preservation of discoverable information and the form or forms in which it should be produced.[17] The Federal Rules promote memorialising ground rules for e-discovery in a court-ordered discovery schedule that will then govern the process.[18]

These new amendments ostensibly force parties to be specific in advance of discovery about the potential sources and forms of relevant electronic information and how they will be preserved, searched and produced during the course of the litigation.[19] According to the Advisory Committee Notes to the new Federal Rules, a party responding to discovery requests affirmatively is required to identify, by category or type, the sources of electronically stored information containing potentially responsive information that it is neither searching nor producing.[20] The Federal Rule further contemplates that '[t]he identification should, to the extent possible, provide enough detail to enable the requesting party to evaluate the burdens and costs of providing the discovery and the likelihood of finding responsive information on the identified sources'.[21]

Parties are also encouraged to address at the outset of a case the form in which electronic information will be produced. Electronically stored information can be produced in various forms: it can be printed out and produced in paper format; it can be produced on discs, in the electronic 'native' format in which it was stored by the producing party, or it can be converted into other electronic formats

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16 Fed. R Civ. P 26(a)(1)(B).
17 Fed. R Civ. P 26(f)(3).
18 Fed. R Civ. P 16(b)(5).
19 *See* MCL 4th, *supra* n. 4 at s. 11.446 (suggesting relevant e-discovery issues to be considered); ABA Civil Discovery Standards, *supra* n. 4 at Art. VIII.31 (identifying topics relating to electronic discovery that parties should discuss during an initial conference).
20 Advisory Committee Notes to Fed. R Civ. P 26(b)(2)(B).
21 *Ibid.*

(for example, Portable Document Format or 'PDF') that may offer greater versatility and efficiency for review and production purposes. The form of production can therefore have significant implications for the cost and efficiency of the discovery process. Whereas paper documents come in only one medium, electronically stored information can exist in any number of software media, and many corporate clients may have custom-designed software or storage media that they use for their business. The form of production can therefore impact whether the information or data is even readable by the requesting party and, perhaps equally important, whether the data can be manipulated and related in the same fashion that it can be on the producing party's computer system so that the production version actually imparts the same quality of information that the producing party possesses.

Under the new Federal Rules, a requesting party, absent agreement or court order, may specify the form of production desired. Absent request, or if the responding party objects, then the responding party may choose to produce the information either 'in a form or forms in which it is ordinarily maintained or in a form or forms that are reasonably usable', and need not produce the same electronic information in more than one form.[22] Parties must therefore consider the form of production up front and, if need be, litigate over it, as part of the discovery process.

The potential value in expressly identifying and front-loading e-discovery issues such as the form of production at the outset of a case, at least in US domestic litigation, should not be understated. The whole point of discovery is to permit a bilateral search for 'the truth' and to allow each party to know what the other side's version thereof is – along with the evidence that supports or impeaches it – prior to a merits hearing or trial. All too often under paper discovery rules, the search for relevant evidence is left to unfold much like a children's game of 'Marco Polo' played in the swimming pool:[23] blind lunging

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[22] Fed. R Civ. P 34(b). Courts are left to interpret on a case-by-case basis what it means for electronic information to be produced in a form or forms 'that are reasonably usable'. *See e.g., Treppel* v. *Biovail Corp.*, 233 FRD 363, 374 n. 6 (SDNY 2006) (ordering the defendant to produce electronic documents in native format as plaintiff requested absent any showing that defendant had a 'substantive basis' for objecting to production in native format); *cf. Williams* v. *Sprint/United Mgmt. Co.*, No. 03-2200-JWL-DJW, 2006 WL 3691604, at *6–8 (D Kan. 12 December 2006) (denying a motion to obtain email files in native format which had already been produced in hard copy form, even though the emails and their attachments were separated in hard copy form and costly and burdensome to match up again). As the Advisory Committee Notes to the new Federal Rules observe, 'the option to produce in a reasonably usable form does not mean that a responding party is free to convert electronically stored information from the form in which it is ordinarily maintained to a different form that makes it more difficult or burdensome for the requesting party to use the information efficiently in the litigation. If the responding party ordinarily maintains the information it is producing in a way that makes it searchable by electronic means, the information should not be produced in a form that removes or significantly degrades this feature'. Advisory Committee Notes to Fed. R Civ. P 34(b).

[23] 'Marco Polo' is a children's game played in a swimming pool that is popular in varying forms in the United States, Australia, Argentina, Canada, Paraguay and Brazil, and also known as 'Bat/Moth' in the United Kingdom. *See* http://en.wikipedia.org/wiki/ Marco_ Polo_(game); www.bookrags.com/wiki/Marco_Polo_(game). One child is blindfolded and must locate and 'tag' the other children in the swimming pool while they try to avoid him or her, everyone's mobility hampered by an aquatic playing field. Each time the blindfolded child calls out 'Marco', all of the remaining children in the pool must answer 'Polo', and so by means of audio reconnaissance, the blindfolded child must hunt and eliminate each of the other children in the pool, unassisted by sight.

about through laborious demands for everything, enforceable only by persistent and targeted repetition, as the responding party continuously tries to manoeuvre out of the way. Grossly overbroad requests are answered by equally overbroad objections. Extensive and expensive motion practice eventually narrows and clarifies what the parties are ill-disposed to be clear about in the first place. Eventually the length of the pool may be covered and all relevant information captured. But discovery is not meant to be a children's game.

The nature of electronic information makes the 'Marco Polo' approach to discovery vastly more unworkable than it ever was before. E-discovery demands more forethought and specificity with regard to the sources of information to be preserved, searched and produced, and in what form, because 'all relevant documents' simply fails to have practical or adequately descriptive meaning in the computer age.

(c) Balancing Need Versus Accessibility

In addition to promoting more forethought and planning, the new Federal Rules provide guidance to courts about how to balance the need of a requesting party for certain electronic discovery versus the burden on the responding party of providing it. Under the amendments, a party must produce any reasonably accessible electronic information responsive to a discovery request, but does not have to provide discovery of electronically stored information located in sources that the party identifies as 'not reasonably accessible because of undue burden or cost'.[24] The party resisting discovery on this basis, if challenged by the requesting party, will then bear the burden of proving the undue burden and cost of producing the requested electronic information. If the requisite showing is made, the court is authorised to order discovery of 'not reasonably accessible' information anyway, if the requesting party shows 'good cause' for obtaining it, subject to any specific conditions the court deems appropriate.[25] The most common and important condition imposed by the courts for the production of 'not reasonably accessible' electronic information is the condition that the requesting party, rather than the responding party, pay for the often substantial cost of searching for and producing the requested electronic information.

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[24] Fed. R Civ. P 26(b)(2)(B).

[25] *Ibid.* To be sure, there will be plenty for parties to fight about: when is electronic information 'not reasonably accessible' and when is 'good cause' shown for discovering such information even though it is not? *See e.g., Ameriwood*, 2006 WL 3825291, at *3–5 (applying the new 'accessibility' and 'good cause' standards under the Federal Rules in ordering the defendant to produce computer hard drives for 'imaging' of all data contained on them in light of 'a sufficient nexus between plaintiff's claims and the need to obtain a mirror image of the computer's hard drive'); *Flexsys Americas LP* v. *Kumho Tire U.S.A., Inc.*, No. 1:05-CV-156, 2006 WL 3526794, at *3 (ND Ohio 6 December 2006) (in a dispute over whether the plaintiff should be required to produce electronic documents from the files of only one custodian or from every employee within the company, balancing the costs and burdens, the court ordered plaintiff to produce electronic documents from 10 custodians of the defendant's choosing).

The Advisory Committee Notes expressly contemplate that discovery may be necessary to inform the balancing test, which may include depositions of party custodians about the party's computer files, forensic expert testimony, and sampling of purportedly inaccessible data – in short, discovery into e-discoverability.[26] In addition, the Federal Rules expressly authorise parties to request to sample or test information sought under the Federal Rule (as an alternative to inspecting and copying it), as a means of economising discovery of voluminous electronic information.[27]

The seminal US case on balancing benefits and burdens in the context of e-discovery is *Zubulake* v. *UBS Warburg*. In a series of rulings, Judge Shira A. Scheindlin of the US District Court for the Southern District of New York addressed questions relating to the discoverability of electronically stored information, shifting costs of electronic discovery among the parties, and when sanctions should be imposed for a party's failure to preserve and produce electronically stored information.[28]

One of *Zubulake's* principal innovations was to identify five categories of data accessibility that courts may employ when balancing the need for electronic information against the burden of producing it. The levels of accessibility identified in *Zubulake* are: (1) 'active, online data' which is available and accessed in the course of day-to-day business activity (*e.g.*, computer hard drives); (2) 'near-line' data, which is stored on optical or magnetic disks, but in an automated library that is rapidly accessible by robotic arms or other computerised means; (3) 'offline storage archives' where optical or magnetic disks reside on a shelf or in storage and therefore require manual intervention to retrieve the information they contain; (4) 'back-up tapes' which mirror a computer's structure rather than a human records management structure and therefore are not organised for searching and retrieving individual files; and (5) 'erased, fragmented or damaged data' which

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[26] *See* Advisory Committee Notes to Rule 26(b)(2). *See e.g.*, *Reino de Espana* v. *American Bureau of Shipping*, No. 03 Civ. 3573 LTS/RLE, 2006 WL 3208579 (SDNY 3 November 2006) (conducting a full evidentiary hearing complete with testimony from computer experts, to determine the availability of electronic records); *Peskoff* v. *Faber*, No. 04-526(HHK/JMF), 2006 WL 1933483, at *4–5 (DDC 11 July 2006) (ordering defendant to provide an affidavit detailing its search efforts in light of its failure to explain the absence from its e-document productions of potentially relevant emails between 2001 and 2003 and threatening to conduct an evidentiary hearing including 'testimony from [defendant's] employees and other witnesses about the effectiveness and cost of any additional searches' for the missing emails).

[27] *See* Fed. R Civ. P 34(a). *See e.g.*, *Zurich Am. Ins. Co.* v. *Ace Am. Reins. Co.*, No. 05 Civ. 9170 RMB JCF, 2006 WL 3771090, at *2 (SDNY 22 December 2006) (where plaintiff sought to discover electronically stored claims files to test whether the defendant had similarly handled allocation issues in the past in other cases, the court observed that '[a] sophisticated reinsurer that operates a multimillion dollar business is entitled to little sympathy for utilizing an opaque data storage system, particularly when, by the nature of its business, it can reasonably anticipate frequent litigation. At the same time, the volume of data accumulated by [defendant] makes a search of its entire database infeasible. The parties shall therefore propose a protocol for sampling [defendant's] claim files to obtain examples of claims files in which issues of the allocation of policy limits have been addressed').

[28] *See Zubulake* v. *UBS Warburg*, 217 FRD 309 (SDNY 2003); *Zubulake* v. *UBS Warburg LLC*, 229 FRD 422 (SDNY 2004); *Zubulake* v. *UBS Warburg LLC*, 220 FRD 212 (SDNY 2003); *Zubulake* v. *UBS Warburg LLC*, 216 FRD 280 (SDNY 2003).

can only be retrieved by significant processing.[29] According to the *Zubulake* court, the first three categories, active data, near-line data, and offline storage archives, qualify as 'accessible' because they are stored in a readily useable format. Back-up tapes and erased, fragmented or damaged data qualify as 'inaccessible'.[30]

The Sedona Principles for Electronic Document Production similarly distinguish between 'accessible' and 'inaccessible' data as follows:

> The primary source of electronically stored information for production should be active data and information. Resort to disaster recovery backup tapes and other sources of electronically stored information that are not reasonably accessible requires the requesting party to demonstrate need and relevance that outweigh the costs and burdens of retrieving and processing the electronically stored information from such sources, including the disruption of business and information management activities.
>
> Absent a showing of special need and relevance a responding party should not be required to preserve, review, or produce deleted, shadowed, fragmented, or residual electronically stored information.[31]

The guidance provided by *Zubulake* and the Sedona Principles has been widely cited and followed in the United States. The amended Federal Rules, for their part, do not set forth a specific test for determining when electronically stored information is 'reasonably accessible'. The Advisory Committee Notes do, however, provide seven considerations for balancing the costs and burdens of requiring a responding party to search and produce information that it has demonstrated is *not* reasonably accessible.[32] These factors are adapted from a similar list devised by *Zubulake* to determine when to shift the costs of e-discovery among the parties; they include:

(1) the specificity of the discovery request;
(2) the quantity of information available from other and more easily accessed sources;
(3) the failure to produce relevant information that seems likely to have existed but is no longer available on more easily accessed sources;[33]

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[29] *Zubulake*, 217 FRD at 318–319. *See also*, Sharp and Sangchompuphen, *supra* n. 11 at 11 (distinguishing among active data, immediately and easily accessible on the client's system, archived data that resides on back-up tapes or other storage media, deleted data, which is deleted but recoverable through computer forensic techniques, and legacy data which was created on old or obsolete hardware or software); MCL 4th, *supra* n. 4 at s. 11.446 (identifying categories of electronic information that 'are generated and stored as a byproduct of … information technologies commonly employed … in the ordinary course of business, but not routinely retrieved').

[30] *See Zubulake*, *supra* n. 28 at 217 FRD at 319–320.

[31] *See* Sedona Principles, *supra* n. 2 at Nos. 8, 9.

[32] Advisory Committee Notes to Fed. R Civ. P 26(b)(2).

[33] Benefit/burden considerations may therefore converge with issues of e-document preservation. *See e.g., Quinby v. Westlb AG*, No. 04Civ.7406 (WHP)(HBP), 2006 WL 2597900, at *9 (SDNY 5 September 2006) ('[I]f a party creates its own burden or expense by converting into an inaccessible format data that it should have reasonably foreseen would be discoverable material at a time when it should have anticipated litigation, then it should not be entitled to shift the costs of restoring and searching the data'). *See also, Wyeth v. Impaz Labs., Inc.*, No. Civ.A. 06-222-JJF, 2006 WL 3091331, at *2 (SDNY 26 October 2006) ('[I]f the requesting party can demonstrate a particularized need for the native format of an electronic document, a court may order it produced. Therefore, the producing party must preserve the integrity of the electronic documents it produces. Failure to do so will not support a contention that production of documents in native format is overly burdensome') (citations omitted).

(4) the likelihood of finding relevant, responsive information that cannot be obtained from other, more easily accessed sources;
(5) predictions as to the importance and usefulness of the further information;
(6) the importance of the issues at stake in the litigation; and
(7) the parties' resources.[34]

The amended Federal Rules and Advisory Committee Notes expressly couple the court's 'reasonably accessible' and 'good cause' inquiry with the authority to set conditions for any discovery that may be required. As the Committee Notes observe, these conditions may include shifting all or a portion of the costs of discovery on to the requesting party. On the one hand, '[a] requesting party's willingness to share or bear the access costs may be weighed by the court in determining whether there is good cause'.[35] But on the other hand, 'the producing party's burdens in reviewing the information for relevance and privilege may weigh against permitting the requested discovery'.[36]

Ultimately, it will be up to judges (and arbitrators) to address need versus burden on a case-by-case basis, as disputes arise. This will require a new level of technical savvy in order to understand the burden and costs involved in retrieving information from diverse, and oftentimes complex, computer hardware and software systems.

Mindful of the burdens peculiar to preserving, searching and producing electronically stored information, the new Federal Rules also innovate ways to recalibrate the burdens. These include a safe harbour against sanctions for a party's failure to preserve documents due to routine, good-faith, disposal of electronic information, and a 'claw-back' provision, designed to alleviate the burden of reviewing electronic information for privilege before it is produced to the opposing side.

(d) Preservation of Electronic Information

Barring 'exceptional circumstances', Federal Rule 37(f) now provides a safe harbour against sanctions for a party's failure to produce electronically stored information that is 'lost as a result of the routine, good-faith operation of an electronic information system'.[37] As the Committee Notes explain, '[t]he "routine operation" of computer systems includes the alteration and overwriting of information, often without the operator's specific direction or awareness, a feature with no direct counterpart in hard-copy documents. Such features are essential to the operation of electronic information systems'.[38]

The new Federal Rules appear to presume that a party will have policies and procedures in place that govern the 'routine' destruction of electronic documents.

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[34] Advisory Committee Notes to Fed. R Civ. P 26(b)(2). *See also*, *Zubulake*, *supra* n. 28, 217 FRD at 322.
[35] Advisory Committee Notes to Fed. R Civ. P 26(b)(2).
[36] *Ibid.*
[37] Fed. R Civ. P 37(f).
[38] Advisory Committee Notes to Fed. R Civ. P 37(f).

The fact is, however, many companies may not. Under the new Federal Rules, failure to manage how electronic information is maintained and periodically destroyed on a computer system is a recipe for trouble. The sanctions for destruction or 'spoliation'[39] of evidence that may be relevant to a pending or anticipated litigation can be severe, even if not intentional.[40] Any organisation that destroys electronic information in the regular course of its business should maintain written retention and destruction policies in order to regularise the process and increase the likelihood of falling within the safe harbour against sanctions.

The new Federal Rules do not specify when and to what extent a party becomes obligated to preserve electronic information relevant to a dispute, leaving that determination to the presiding judge in each case. It is clear from the Advisory Committee Notes, however, that maintaining a routine document destruction policy does not dispense with the need to make appropriate efforts to preserve relevant information which may otherwise be subject to routine disposal:

> The good faith requirement of Rule 37(f) means that a party is not permitted to exploit the routine operation of an information system to thwart discovery obligations by allowing that operation to continue in order to destroy specific stored information that it is required to preserve ... Among the factors that bear on a party's good faith in the routine operation of an information system are the steps the party took to comply with a court order in the case or party agreement requiring preservation of specific electronically stored information.[41]

When is a party obligated to suspend routine computer operations that would otherwise destroy 'specific' information a party is entitled to preserve? The Sedona Principles suggest that parties need not 'take every conceivable step to preserve all potentially relevant electronically stored information', but need only make 'reasonable and good faith efforts to retain' potentially relevant e-information.[42]

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[39] Spoliation means 'the destruction or significant alteration of evidence, or the failure to preserve property for another's use as evidence in pending or reasonably foreseeable litigation'. *West* v. *Goodyear Tire & Rubber Co.*, 167 F.3d 776, 779 (2d Cir. 1999).

[40] *See e.g., In re Quintus*, 353 BR 77, 83–84, 93 (Bankr. D Del. 2006) (awarding the extreme sanction of summary judgment where the defendant destroyed electronic financial records that went to the heart of the dispute, even though the defendant did not deliberately destroy the records to suppress the truth but instead 'deliberately' deleted the records simply to create more available computer space); *Consolidated Aluminum Corp.* v. *Alcoa, Inc.*, No. 03-1055-C-M2, 2006 WL 2583308, at *3–9 (MD La. 19 July 2006) (finding that defendant *negligently* failed to preserve emails of certain relevant custodians when it first anticipated litigation and awarding as sanctions the costs of plaintiff re-deposing witnesses to inquire into issues raised by the destruction of evidence, together with plaintiff's reasonable costs and attorneys' fees in filing a motion for sanctions). *Intentional* destruction of relevant electronic information can lead to even more dire consequences. *See e.g., Coleman (Parent) Holdings, Inc.* v. *Morgan Stanley & Co.*, No. CA 03-5045 AI, 2005 WL 674885 (23 March 2005) (awarding default judgment against the defendant, resulting in a US$1.5 billion damages award, as a result of the defendant's bad faith failure to comply with its discovery obligations and efforts to then conceal that failure from the plaintiff and the court).

[41] Advisory Committee Notes to Fed. R Civ. P 37(f).

[42] Sedona Principles, *supra* n. 2 at No. 5. *See also, Zubulake*, *supra* n. 28, 220 FRD at 217 ('Must a corporation, upon recognizing the threat of litigation, preserve every shred of paper, every e-mail or electronic document, and every backup tape? The answer is clearly, "no". Such a rule would cripple large corporations, like [defendant], that are almost always involved in litigation').

The *Zubulake* case offers more specific guidance, noting that the duty to preserve has two components: (1) the trigger date – *when* the duty attaches; and (2) the scope of the duty – *what* evidence must then be preserved.[43]

According to *Zubulake*, the duty to preserve may be triggered well before a lawsuit is filed and arises 'when the party has notice that the evidence is relevant to litigation or when a party *should have known* that the evidence may be relevant to *future* litigation'.[44] The scope of the duty, once triggered, broadly includes 'what [the party] knows, or reasonably should know, is relevant in the action, is reasonably calculated to lead to the discovery of admissible evidence, is reasonably likely to be requested during discovery and/or is the subject of a pending discovery request'.[45] Applied to the case before it, the *Zubulake* court concluded that as a general rule the duty to preserve does not apply to 'inaccessible' categories of data (back-up tapes and erased, fragmented or damaged data), unless they contain documents of 'key players' in the litigation which otherwise would not be available.[46] According to the Federal Rule Committee Notes, however, '[a] party's identification of sources of electronically stored information as not reasonably accessible does not relieve the party of its common-law or statutory duties to preserve evidence' – at least not before a *court* decides that the information is indeed inaccessible.[47] It would appear then, as between *Zubulake* and the new Federal Rules of e-discovery, that parties engaged in US federal litigation must preserve potentially relevant information in any 'accessible' location, which includes 'active data', 'near-line' data, and 'offline storage'.

In light of the good-faith obligation to prevent routine operations from destroying potentially relevant information, organisations subject to the Federal Rules are well advised to adopt procedures for capturing electronic information, once litigation first becomes probable, and sequestering it from the day-to-day computer processes necessary to run the business which may otherwise overwrite or destroy relevant evidence. Technology is available that can 'snapshot' information located in a computer system as of a particular point in time, allowing it to be preserved off the system while the company's routine computer functions continue to operate. By the same token, it makes no sense, absent pending litigation, to maintain voluminous offline storage and back-up data that have no continuing business purpose, since the data may serve only to become a burdensome liability when litigation does arise.

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[43] *See Zubulake*, *supra* n. 28, 220 FRD at 216–218.

[44] *Ibid.* at 216 (quoting *Fujitsu Ltd* v. *Federal Express Corp.*, 247 F.3d 423, 436 (2d Cir. 2001)) (emphasis added).

[45] *See Zubulake*, *supra* n. 28, 220 FRD at 217 (quoting *Turner* v. *Hudson Transit Lines, Inc.*, 142 FRD 68, 72 (SDNY 1991)).

[46] *See Zubulake*, *supra* n. 28, 220 FRD at 218 ('Once a party reasonably anticipates litigation, it must suspend its routine document retention/destruction policy and put in place a "litigation hold" to ensure the preservation of relevant documents. As a general rule, that litigation hold does not apply to inaccessible backup tapes (*e.g.*, those typically maintained solely for the purpose of disaster recovery), which may continue to be recycled on the schedule set forth in the company's policy. On the other hand, if backup tapes are accessible (*i.e.*, actively used for information retrieval), then such tapes *would* likely be subject to the litigation hold').

[47] Advisory Committee Notes to Fed. R Civ. P 26(b)(2).

Because of the volume, dispersion and durability of electronically stored information, the need for clear, company-wide policies both to effect the routine destruction of unnecessary information wherever it may reside, but also to systematically capture and 'hold' onto material that may relate to a pending litigation, is all the more acute. In the electronic age, any company employee with an email account, not just a company's formal records department, can be the source of case-making – or case-breaking – evidence.

(e) Privilege and Waiver

Perhaps one of the most onerous and time-consuming elements of discovery is the responding party's obligation to review documents for privilege before they are produced – lest a privileged document's disclosure result in a waiver of the privilege.[48] The amended Federal Rules seek to address this burden in the context of e-discovery by providing a 'claw-back' provision for privileged information that is inadvertently produced. Under Federal Rule 26(b)(5)(B), a party that inadvertently produces privileged information may ask for its return, in which case the opposing party may not use the document, and must take reasonable steps to return the document and otherwise protect it from disclosure until the court can rule on the claim of privilege.[49] Parties are also encouraged to agree on protocols at the outset of the case to govern inadvertently produced privileged documents, which a court may consider in determining whether waiver of the privilege has occurred.[50]

However, 'Rule 26(b)(5)(B) does not address whether the privilege or protection that is asserted after production was waived by the production'.[51] The Rule merely 'provides a procedure for presenting and addressing these issues'.[52] Parties and counsel therefore understandably may be wary of foregoing privilege review prior to production, notwithstanding the new claw-back provision. Privilege waiver analysis in the United States is the subject of existing legal principles developed over many years through common-law case precedent, which may or may not sanction the claw-back concept contemplated by the new Federal Rules.[53] For this reason, the addition of a new Federal Rule of Evidence 502 has been proposed that would standardise the law of waiver, such that inadvertent

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[48] *See* Advisory Committee Notes to Fed. R Civ. P 26(b)(5) ("The Committee has repeatedly been advised that the risk of privilege waiver, and the work necessary to avoid it, add to the costs and delay of discovery. When the review is of electronically stored information, the risk of waiver, and the time and effort required to avoid it, can increase substantially because of the volume of electronically stored information and the difficulty in ensuring that all information to be produced has in fact been reviewed"); *Hopson v. Mayor and City Council of Baltimore*, 232 FRD 228, 244 (D Md. 2005) (observing in the context of electronic discovery that insisting upon 'record-by-record pre-production privilege review, on pain of subject matter waiver, would impose upon parties costs of production that bear no proportionality to what is at stake in the litigation').

[49] Advisory Committee Notes to Fed. R Civ. P 26(b)(5)(B).

[50] *Ibid.*; Fed. R Civ. P 26(f).

[51] Advisory Committee Notes to Fed. R Civ. P 26(b)(5)(B).

[52] *Ibid.*

[53] *See* Fed. R Evid. 501.

disclosure would not constitute a waiver of privilege, provided the procedures afforded under Federal Rule 26(b)(5)(B) were followed.[54]

IV. E-DISCLOSURE IN INTERNATIONAL ARBITRATION

Having surveyed the new US approaches to e-discovery, the question becomes: how should electronic document production be addressed in international arbitration? Are new rules or guidelines needed to address the special challenges of electronic documents? If so, are the new Federal Rules in the United States an appropriate model for e-document production in international arbitration?

(a) Need for E-Disclosure Guidelines in International Arbitration

Most of the principal sets of international arbitration rules empower arbitral tribunals to order the production of 'documents' or other 'evidence', but are silent about how documents and other evidence are to be preserved, gathered and presented, and say nothing about electronic information in particular.[55] The International Bar Association's Rules on the Taking of Evidence in International Commercial Arbitration ('IBA Rules'), by contrast, prescribe model rules for the taking of evidence in international arbitration as a 'resource to parties and to arbitrators in order to enable them to conduct the evidence phase of international arbitration proceedings in an efficient and economical manner'.[56] While the IBA Rules specifically define the 'document[s]' to be requested and produced in arbitration to encompass electronically stored information,[57] they, too, fail to include any specific rules with respect to the preservation, gathering and disclosure of electronic information in particular. Thus, there are no arbitration rules currently available that provide specific guidelines with respect to the issues and challenges unique to the disclosure of electronic information.

As the Sedona Conference observed with respect to US domestic litigation, '[w]ithout standards [to address e-document production], parties are left to guess as to what their obligations are, with the threat of discovery violations for incorrect guesses'.[58] The same is true in international arbitration. Indeed, the uncertainties with respect to e-document production may be even greater in international arbitration to the extent that parties, counsel and arbitrators from different countries and cultures are involved, each with different practices and expectations concerning document production and electronic information. While some may be hesitant to promulgate specific e-document production rules for fear that such rules may invite or accelerate the unwelcome phenomenon of

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[54] *See Report of the Advisory Committee on Evidence Rules* (15 May 2006), available at www.uscourts.gov/rules/Reports/EV05-2006.pdf.

[55] *See e.g.*, UNCITRAL Arbitration Rules, art. 24.3; ICC Arbitration Rules, art. 20.5; LCIA Arbitration Rules, art. 22.1(e); AAA (ICDR) Arbitration Rules, arts. 19.2–19.3.

[56] IBA Rules, 'Foreword'.

[57] *See* IBA Rules, art. 1 (defining 'document' to include a writing recorded by 'electronic means ... or any other mechanical or electronic means of storing or recording information').

[58] Sedona Principles (1st edn, July 2005 version), 'Introduction'.

e-discovery in international arbitration – *i.e.*, that the cure may be worse than the disease in its present state – it is unrealistic to imagine international arbitration immune from the electronic age, either now or at least for long. The potential benefits of certainty and uniformity that specific e-disclosure guidelines for international arbitration offer therefore outweigh the risks that such guidelines present.

(b) Formulating E-Disclosure Guidelines for International Arbitration

Assuming e-disclosure guidelines for international arbitration may be helpful, what guidelines should be adopted? Should the new e-disclosure rules developed in US domestic litigation be adopted in or adapted to international arbitration and, if so, to what extent? Do the existing IBA Rules on the Taking of Evidence need amendment in order to provide for e-disclosure in international arbitration and, if so, what amendments are needed? To answer these questions, and to tailor specific e-disclosure rules for international arbitration, one must first examine whether and to what extent the differences between document production in international arbitration and US domestic litigation call for different e-disclosure guidelines for each.

On one hand, the primary *purposes* of disclosure are the same in international arbitration as they are in litigation: to avoid unfair surprise at trial or hearing and to discover the facts and get to the truth in order to create the record necessary for a just result.[59] So what difference should it make if a 'smoking gun' exists on a back-up email drive rather than in a paper document: should it not be produced either in litigation or in arbitration? Or do the differences between electronic information and paper documents mean something different for arbitration, even at the expense of finding a dispositive email buried deep within a terabyte of stored information?

In fact, international arbitration *is* different from domestic litigation both because it is *arbitration* and because it is *international*. Arbitration is supposed to be a less expensive, more expeditious form of dispute resolution than litigation, and e-discovery can be a particularly burdensome, expensive and time-consuming process. That said, as the stakes and complexity of disputes in international arbitration continue to rise it is simply no longer realistic or sensible to dismiss e-discovery as an unnecessary burden and expense associated with domestic litigation. Nevertheless, the e-disclosure rules in international arbitration may strike a different balance between the competing values of the search for truth and avoidance of expense and delay than do the e-discovery rules in US domestic litigation.

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[59] The IBA Rules are premised on the idea that 'each Party shall be entitled to know, reasonably in advance of any Evidentiary Hearing, the evidence on which the other Parties rely'. IBA Rules, Preamble. *See also*, Robert H. Smit, 'Towards Greater Efficiency in Document Production before Arbitral Tribunals: a North American Viewpoint' in 2006 Special Supplement to (2006) *ICC International Court of Arbitration Bulletin* 93 (comparing the objectives of document production in US litigation and in international arbitration).

The international aspect of international arbitration also dictates a more flexible approach to e-document production than that prescribed in the new Federal Rules for US litigation. Whereas broad discovery is an expected and accepted fact of litigation in the United States, making its extension and application to electronic information easier to digest in US domestic litigation, such broad discovery is anathema to international arbitration and e-disclosure, thus less easily digested.[60] Parties, counsel and arbitrators from civil law countries, where little or no discovery is available or tolerated, can hardly be expected to embrace, without reservations or limitations, wholesale adoption of the broad e-discovery regime prescribed by the US Federal Rules. Clearly, e-disclosure guidelines more consonant with the hybrid common law-civil law approach adopted in the IBA Rules for the Taking of Evidence in international arbitration must be developed.

(c) Towards Specific E-Disclosure Guidelines in International Arbitration

In considering whether and how to adopt and adapt the new US e-discovery rules for international arbitration, perhaps only one thing is certain: whatever guidelines are adopted for international arbitration, they should be called 'disclosure' rather than 'discovery' guidelines in order to avoid association with the much-maligned US discovery regime. Beyond that, it is instructive to examine which of the specific new Federal Rules or Sedona Principles might usefully be incorporated or adapted into a new set of e-disclosure guidelines for international arbitration. Annexed to this article are the authors' proposed 'Guidelines for Disclosure of Electronic Documents in International Arbitration', which combine and adapt various features and rules, as discussed below, from the IBA Rules on the Taking of Evidence in International Arbitration, the new Federal Rules on e-discovery and the Sedona Principles Addressing Electronic Document Production.[61] The Proposed Guidelines contemplate five specific issues: (1) the

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[60] As the IBA Working Group responsible for the IBA Rules noted: 'There shall be no U.S.-style pre-trial discovery ... Pre-trial discovery and fishing expeditions by one party against another are out of place in international arbitration'. H. Raeschke-Kessler, 'The Production of Documents in International Arbitration: a Commentary on Art. 3 of the New IBA-Rules of Evidence' in *Law of International Business and Dispute Settlement in the 21st Century: Liber Amicorum Karl-Heinz Böckstiegel* (Heymanns, Cologne, 2001), p. 641 at p. 644.

[61] The authors understand that there are at least two other initiatives underway in the United States to address e-disclosure issues in arbitration, although it does not appear that either of those initiatives is designed both to provide comprehensive guidelines for all recurring e-disclosure issues and to tailor such guidelines to *international* arbitration in particular. First, the American Arbitration Association has formed a taskforce to examine, and potentially develop a protocol for, 'discovery' in international arbitration, including certain e-discovery issues. It appears that the AAA taskforce is focusing on one e-discovery issue in particular: the form in which electronically stored information is to be produced, *i.e.*, electronic or hard copy form (*see* Authors' Proposed Guidelines, Nos. 4 and 5, proposing that this issue be addressed early in the arbitral proceedings by agreement of the parties and/or procedural order of the arbitral tribunal) although we are advised that the taskforce's deliberations and work product are not yet final. Secondly, the Center for Public Resource's Arbitration Committee (chaired by one of the authors, Robert Smit) has formed a subcommittee to consider developing rules or guidelines for the taking of evidence, including e-disclosure, in arbitration. The original focus of that CPR subcommittee was on US domestic (as opposed to international) arbitration, and that subcommittee's deliberations and work product remain at a relatively preliminary stage.

need to address electronic disclosure issues early and expressly in the course of arbitration; (2) identifying the format in which electronically stored information will be produced; (3) striking a balance between one party's need for electronic information against the costs and burdens associated with the responding party having to access, review and produce that information; (4) the duty to preserve electronic information; and (5) privilege and waiver concerns that arise in connection with electronic document production. In each instance, the treatment of these issues and their implications under the existing IBA Rules on the Taking of Evidence in International Commercial Arbitration are considered.

(i) Addressing e-disclosure issues up front

The new Federal Rules direct parties and courts to address e-discovery issues up front by requiring parties, at the outset of a lawsuit, to identify all e-information in their control that they may use to support their claims or defences, to meet and confer early in the proceedings to address e-discovery issues, and to memorialise ground rules for e-discovery in a court-ordered discovery schedule that will govern the process.[62]

Unlike in US litigation, disclosure in international arbitration is neither presumed nor automatic but rather may be tailored to the needs of a particular dispute. It may therefore not be necessary or appropriate to impose an automatic and invariable obligation on parties or arbitrators to address and resolve e-disclosure issues up front in international arbitration, as the Federal Rules do in US litigation. On the other hand, in many if not most international arbitrations, it may be desirable for parties to at least consider potential e-disclosure issues early in the proceedings, either through meet-and-confer discussions between the parties prior to the disclosure stage of the proceedings and/or, if appropriate, at a preliminary procedural conference with the arbitral tribunal. This will promote a more efficient and transparent disclosure process, whatever the outcome of discussions may be (including if the parties agree or the tribunal directs that no e-disclosure will take place). Issues that are as appropriate for consideration in arbitration as in litigation include whether and where there are sources of electronic information that may contain evidence that the opposing side should be entitled to obtain, appropriate preservation measures to be taken, and the form in which various sources of electronic information will be disclosed. (*See* Authors' Proposed Guidelines, Nos. 4 and 5.)

Article 3 of the IBA Rules contemplates that the parties will confer with the tribunal on any document disputes which may arise. Since the definition of a 'document' under the IBA Rules plainly encompasses 'electronic means of storing or recording information', article 3's procedure for raising and resolving document disclosure issues should bring before the tribunal any issues concerning

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[62] *See* Fed. R Civ. P 26(a)(1)(B), 26(f)(3) and 16(b)(5).

electronically stored information, eventually. The authors' Proposed Guidelines for international arbitration more specifically encourage discussion of preservation issues at the outset of the proceedings so that any disputes are joined up front, ahead of the disclosure process, rather than only piecemeal, as it progresses. Identifying for parties and tribunals the kinds of e-disclosure issues that ought to be addressed early in the proceedings – while leaving to their disposal how best to do so in each particular case – will provide needed guidance specific to electronic media, while serving the objectives of economy and flexibility that make arbitration a valued alternative to litigation.

(ii) Addressing the form of production

Under the new US Federal Rules, as noted above, a party's document requests may specify the form or forms in which electronically stored information will be produced, to which the responding party may then object, stating the reasons for its objection.[63] If no form of production is specified, then the responding party must produce the information in the form in which it is ordinarily maintained or in a form that is reasonably usable, but need not produce the same information in more than one form. In the event of a dispute about the form of production, the court will have to resolve the issue, likely on the basis of weighing considerations of burden and cost (with the authority to shift costs onto the requesting party in its discretion should it deem that measure appropriate).

Although the IBA Rules at least implicitly contemplate electronic disclosure issues coming before the tribunal, they do not specify a default rule to address the form of electronic production or provide a framework for resolving disputes that may arise in that respect. IBA Rule 3.11 specifies that copies of documents must conform to the originals and that the parties must be prepared to submit originals to the tribunal for inspection. Arguably this Rule can also be extended by analogy to electronic forms of production, even if the language of Rule 3.11 seems geared primarily toward hard copy production. Of course, hard copy production may continue to be a common and perfectly acceptable form of production for many kinds of electronic information. Still, it may not always be so. Analogising hard copy terminology like 'copies' and 'originals' to electronic media is probably not the most informative or predictable way to address electronically stored information. Parties and arbitrators need guidelines that flexibly embrace electronic media, including ever-evolving varieties of software as well as custom databases, for which the concept of an 'original' and 'copy' may be ill-suited. The Authors' Guidelines propose a default rule like that of the Federal Rules (*see* Authors' Proposed Guidelines, No. 8) – so that there is one – while the mechanism for a tribunal to resolve disputes about the form of production follows that of other issues implicating need versus cost, to which we now turn.

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[63] Fed. R Civ. P 34(b).

(iii) Balancing need versus accessibility

In arbitration as in litigation, electronic information may dramatically alter the balance between one party's need for production against the other party's burden and cost in accessing, searching and disclosing various sources of electronically stored information. The US approach to electronic information offers at least three observations for the conduct of e-disclosure in international arbitration.

First, electronic information, though *less* suited to the 'blunderbuss' approach typical of US-style discovery, seems well suited to the more targeted 'rifle-shot' disclosure endorsed by the IBA Rules. Under the IBA Rules, in addition to each party exchanging 'all documents available to it on which it relies', parties are entitled to submit a request to produce either specific documents or 'a narrow and specific requested category of documents that are reasonably believed to exist' and demonstrated to be 'relevant and material to the outcome of the case'.[64] The ability to organise and filter electronic information, by date, custodian, location, and through the application of specific search terms, should allow narrowly targeted information requests to penetrate otherwise hugely voluminous amounts of electronically stored information. Parties and tribunals should be encouraged to consider how computerised search techniques can be employed to request, retrieve and produce narrow and specific categories of electronic information. (*See* Authors' Proposed Guidelines, Nos. 6 and 10.) 'Smoking gun' documents can and should be disclosed if 'the truth' is to prevail. Computers offer intelligent new ways to find relevant material while minimising the time, cost, intrusion and burden required.

Secondly, the conduct of e-disclosure in international arbitration might borrow a similar scale of accessibility and similar balancing factors to those that courts have applied to electronic information in US litigation. Costs and burdens are balanced in order to adjust the scope of disclosure up or down the scale of accessibility depending on the particular circumstances of each case. The burdens and benefits need not be weighted to adjust the scope of disclosure in the same (liberal) manner as may prove to be the case in the context of US litigation. (*See* Authors' Proposed Guidelines, Nos. 16–18.) For instance, the *Zubulake* court's conclusion that in addition to a party's active computer hard drives, 'near-line' and 'offline' data also generally qualify as 'accessible' for purposes of a responding party's production obligations, may or may not comport with the expectation of parties to international arbitration. The appropriate balance may depend on the issues (and monetary values) at stake, the likelihood and quality of information to be found, and the parties' resources. To the lists of factors developed by the *Zubalake* court and in the Sedona Principles for e-discovery in US litigation may be added the national and cultural expectations of the parties vis-à-vis disclosure of e-information in international arbitration.

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[64] IBA Rules, art. 3.

Similarly, while the Federal Rules expressly endorse the use of discovery to assist the court in balancing the relative needs and burdens,[65] it seems unlikely that international arbitral tribunals will be inclined to conduct mini-trials into the disclosurability of electronic information, *i.e.*, discovery into e-disclosurability. But particularly large and complex arbitrations may justify some of the measures that have been used by US courts, such as sampling of purportedly inaccessible information. The salient point is that the structure of analysis employed by US courts – the levels of accessibility and the elements of burden and benefit considered – can offer useful guidance to arbitral tribunals in reaching whatever result best serves the parties to the international arbitration at hand. (*See* Authors' Proposed Guidelines, Nos. 12–15.)

Thirdly, arbitral tribunals can employ US-style cost-shifting analysis as a means of adjusting the scope of e-disclosure appropriate in the context of each case. As in weighing the relative costs and burdens of searching particular forms of electronic media, arbitral tribunals need not reach the same conclusions as US courts, even if employing the same tools of analysis. Cost shifting can be an effective way to liberalise the scope of disclosure for particular sources of electronic information when the likelihood of identifying relevant documents is high, while discouraging a party from pursuing electronic disclosure when the likelihood of yielding actually useful information from the relevant documents is low or when the inquiry is for the sole purpose of harassing the opposing party. (*See* Authors' Proposed Guidelines, Nos. 13, 15 and 18.)

Are the existing IBA Rules expansive enough to embrace these concepts? Articles 3 and 9 of the IBA Rules together contemplate that a responding party may object to the production of documents on grounds which include 'unreasonable burden to produce', 'loss or destruction of the document', and catch-all 'considerations of fairness or equality'.[66] In 'exceptional circumstances', Rule 3.7 allows the tribunal to appoint an independent and impartial expert to assist in resolving document disclosure objections.[67] These concepts appear broad enough to permit arbitral tribunals to weigh one party's need against another party's burden in relation to electronically stored information, and even enlist forensic expert assistance if the technology at issue is unusually complex or custom-designed. The IBA Rules do not expressly and specifically vest the tribunal with authority to order cost or fee shifting in connection with particularly onerous, yet important document disclosure, even of the hard copy variety. As a practical matter, that authority may be inherent, or supplied by the applicable rules of the relevant arbitral institution, such as the ICC or LCIA Arbitration Rules. Cost shifting can be enforced by means of a tribunal's inherent coercive power to impose on the requesting party, if they really want the materials they are

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[65] *See* Advisory Committee Notes to Federal Rule 26(b)(2).
[66] IBA Rules, art. 9.2.
[67] *Ibid.* art. 3.7.

after, to agree to pay for that access or, conversely, to draw adverse inferences from a responding party's failure to produce. But like the US Federal Rules of Civil Procedure prior to their recent amendment, the existing IBA Rules, unelaborated, do not really lend sufficient certainty or predictability to the process of electronic document disclosure in international arbitration.

(iv) Preservation of electronic information

When should parties be obligated to preserve electronic information in anticipation of international arbitration, and what information must they preserve? The volume, dispersion and dynamism of electronic information make these considerations as salient for arbitration as they are for litigation. But the timing and scope of the duty may need to be different.

In general terms, the obligation to undertake good faith efforts to preserve potentially relevant evidence, or at least not to intentionally destroy potentially relevant electronic evidence, when arbitration is or should be first anticipated, seems uncontroversial. If truth is to prevail, that obligation should attach equally to electronically stored information as to paper documents – particularly inasmuch as electronic forms of drafting and communication have substantially replaced their hard copy ancestors already. But the meaning of 'good faith' in the context of international arbitration may mean something different than in litigation.

Because 'good faith' is a flexible concept, it should allow arbitral tribunals to adjust the scope of the duty to preserve electronic information to fit the circumstances of each case and the reasonable expectations of the parties. Some disputes will implicate electronic information more than others. Some may not reasonably implicate electronic information at all. Different disputes may implicate different sources of electronic information. Because the scope of disclosure in international arbitration is generally more targeted and narrow than in US domestic litigation, the *Zubulake* formulation of the duty to preserve – encompassing everything that a party should know is relevant or reasonably calculated to lead to the discovery of admissible evidence – is inapt. Arbitral tribunals can adopt a narrower focus, which may expand or contract from one case to the next, consistent with the reasonable expectations of the parties involved and in light of the nature of the dispute at hand. (*See* Authors' Proposed Guidelines, No. 19.) For example, because the duty to preserve information is necessarily tied to a party's reasonable expectations as to the likely scope of disclosure in litigation or arbitration, it may not be appropriate under some circumstances for a tribunal to sanction a party, by adverse inference or otherwise, for failing to preserve electronic information if that party comes from a country or culture with no tradition of disclosure and hence in good faith did not appreciate the need to preserve its electronic data. However, intentional efforts to thwart appropriate disclosure or destroy information within the scope of preservation that common sense dictates ought to apply should just as surely be punished in international arbitration as in litigation. (*See* Authors' Proposed Guidelines, No. 20.)

The IBA Rules provide a mechanism for sanctioning a party's failure to produce documents without 'satisfactory explanation'. Specifically, the IBA Rules direct that the arbitral tribunal 'shall, at the request of a Party or on its own motion, exclude from evidence or production any document' on the ground of 'loss or destruction of the document that has been reasonably shown to have occurred'.[68] The IBA Rules further provide, '[i]f a Party fails without satisfactory explanation to produce any document requested in a Request to Produce to which it has not objected in due time or fails to produce any document ordered to be produced by the Arbitral Tribunal, the Arbitral Tribunal may infer that such document would be adverse to the interests of that Party'.[69]

But as the Advisory Committee Notes to the new Federal Rules observe, '[m]any steps essential to computer operation may alter or destroy information, for reasons that have nothing to do with how that information might relate to litigation. As a result, the ordinary operation of computer systems creates a risk that a party may lose potentially discoverable information without culpable conduct on its part'.[70] Thus, under the new Federal Rules, parties are directed to 'pay particular attention to the balance between the competing needs to preserve relevant evidence and to continue routine operations critical to ongoing activities' when parties are dependent on computer systems for their day-to-day operations.[71] For this reason, organisations are well advised to regularise the destruction of electronic information through written retention and destruction policies. Internal IT capabilities should ordinarily include the capacity to 'snapshot' discrete sources of electronic information to preserve them as of the point in time when a dispute arises for which arbitration is anticipated. Back-up data should not be maintained once it ceases to provide a useful business purpose. At the same time, however, the standard for imposing adverse inferences or other sanctions when electronic evidence is inadvertently lost, under the IBA Rules or otherwise, should recognise and accommodate the dynamic nature of electronically stored information. (*See* Authors' Proposed Guidelines, No. 20.)

(v) Privilege and waiver

The sheer volume of electronic information that may pertain to the average business dispute requires new approaches to the rules of privilege and waiver. Reviewing all information for privilege before it is produced is one of the most burdensome and costly aspects of litigation. This is ordinarily less of an issue in international arbitration because more restrictive rules of disclosure, and more relaxed procedures for recording assertions of privilege, often spare parties the volumes of producible information and privilege logs which are now regularly

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[68] *Ibid.* art. 9.2(d).
[69] *Ibid.* art. 9.4.
[70] Advisory Committee Notes to Fed. R Civ. P 37(f).
[71] Advisory Committee Notes to Fed. R Civ. P 26(f).

encountered in US domestic litigation. But privilege and waiver issues become increasingly relevant as international commerce grows ever larger and arbitral tribunals face more complex matters. The US approach to this problem has encountered technical difficulties because common-law principles of waiver developed through years of case precedent do not necessarily coincide with amendments to the codified Federal Rules meant to address modern computer practices. Because international arbitration is typically not bound by strict rules of evidence or procedure, arbitral tribunals have more flexibility to take a practical approach.

Under the IBA Rules, a party may object to the production of documents on grounds of 'legal impediment or privilege under the legal or ethical rules determined by the Arbitral Tribunal to be applicable'.[72] But the IBA Rules do not provide guidance on how to police the privilege in practical terms when electronic disclosure involves voluminous amounts of information and the responding party is left to risk waiver or otherwise sift through all of that information in search of what will likely be a comparatively small, but highly confidential number of privileged documents.

Disclosures of privileged electronic information that result from the fact that it is just too burdensome and costly to review everything for privilege prior to production should not result in a waiver of the privilege. Parties can agree to that at the outset of a case. Arbitral tribunals can encourage parties to do so and enforce 'claw-back' arrangements like that recognised under the new US Federal Rules, which allow privileges to be preserved in the modern age of electronic information. (*See* Authors' Proposed Guidelines, Nos. 21–22.)

V. CONCLUSION

Justice, whether administered through arbitration or litigation, is as much about the process as it is the result. Arbitration is favoured for its flexibility, expedience and economy, but not at the expense of predictable rules and guidelines that promise a fair result, which courts around the world with diverse legal traditions will be prepared to enforce. Computers have revolutionised business and changed the nature of business disputes. Disclosure of electronic information will inevitably play an increasingly determinative role in international business disputes that are submitted to arbitration. The existing IBA Rules appear broad enough to embrace electronic information generally, and permit tribunals to reach commonsense results on an ad hoc basis. But like the recently amended Federal Rules of Civil Procedure in the United States, e-disclosure guidelines are necessary to supplement the IBA Rules to promote predictability, uniformity and hence fairness in the e-disclosure process in international arbitration.

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[72] IBA Rules, art. 9.2(b).

VI. GUIDELINES FOR DISCLOSURE OF ELECTRONICALLY STORED INFORMATION IN INTERNATIONAL ARBITRATION

These Guidelines set forth recommended practices and principles for disclosure of electronically stored information in international arbitration, selected and adapted from the IBA Rules on the Taking of Evidence in International Arbitration, the Federal Rules of Civil Procedure and the Sedona Conference Principles for Addressing Electronic Document Production. They are intended as a resource for parties and arbitrators in addressing the often difficult and unique issues presented by the preservation, retrieval and production of electronic information in international arbitration.

(a) General Guidelines

1. Electronically stored information – consisting of any documents, data or other information stored in electronic form – is potentially subject to disclosure in international arbitration if the parties so agree or the arbitral tribunal so determines.
2. The preservation and production of electronically stored information shall be subject to such rules, procedures and conditions as the parties agree or the arbitral tribunal determines.
3. Unless the parties agree or the arbitral tribunal determines otherwise, the procedures applicable to requests for the production of 'documents' generally shall be understood to encompass and apply to electronically stored information, subject to these Guidelines.

(b) Early Consideration of Electronic Disclosure Issues

4. The parties should confer and seek to agree early in the arbitration as to whether and how electronically stored information is to be preserved and produced in the arbitration. Among the issues the parties may consider are: whether electronically stored information will be subject to production in the arbitration; whether and how electronically stored information is to be preserved by each party; what sources of electronically stored information (*e.g.*, active online sources, near-live sources, offline and back-up storage sources, etc.) are to be subject to disclosure; procedures for requesting and responding to requests for electronically stored information, including the potential use of search terms to request and retrieve electronically stored information; the form(s) in which electronically stored information is to be produced; the allocation of costs incurred in searching or producing electronically stored information; and any special privilege or waiver arrangements with respect to the production of electronically stored information.
5. The parties and arbitral tribunal should consider the advisability of addressing specific issues concerning the preservation and production of electronically stored information in a preliminary procedural conference

among the parties and the arbitral tribunal and/or in a procedural stipulation and order agreed by the parties and/or directed by the arbitral tribunal.

(c) Electronic Disclosure Requests, Responses and Disputes

6. A party's request for disclosure of electronically stored information should identify with particularity either the specific electronic documents or narrow and specific category of electronic documents sought. In its request for disclosure, a party may identify specific key words, names, or phrases to be used to search electronically stored information for specific documents or categories of documents.
7. The responding party is best situated to evaluate the procedures, methodologies and technologies appropriate for preserving and producing its own electronically stored information.
8. The requesting party may specify the form or forms in which electronically stored information is to be produced. If no form or forms is specified, the responding party must produce electronically stored information in the form or forms in which it is ordinarily maintained or in a reasonably usable form. If the responding party objects to a requested form of production, and the parties are unable to resolve the objection by agreement, the issue may be raised with the arbitral tribunal. The requesting party shall have the burden to show that the need for electronic disclosure in the form requested outweighs the burdens and costs of providing disclosure in that form. In resolving disputes concerning the form of production of electronically stored information, the arbitral tribunal and parties may consider, without limitation, the criteria and measures identified in Guidelines 13, 14, and 15 below.
9. The requesting party has the burden, upon application to the arbitral tribunal, to show that the responding party's steps to preserve and produce electronically stored information were inadequate.
10. The responding party may satisfy its good faith obligation to preserve and produce potentially responsive electronically stored information by using electronic tools and processes, such as data sampling, searching, or the use of selection criteria, to identify electronic documents reasonably likely to contain responsive information.
11. In responding to a request for electronically stored information, a responding party may object to providing, and need not provide, disclosure of electronically stored information that the party identifies as not reasonably accessible because of undue burden or cost. The responding party's responses and objections should identify the scope and limits of the electronically stored information it is producing.
12. If the parties cannot agree whether, or on what terms, electronically stored information identified as not reasonably accessible should be searched and disclosable electronic documents produced, the issue may be

raised with the arbitral tribunal. Upon such application to the arbitral tribunal, the responding party must show that the identified sources of electronically stored information are not reasonably accessible because of undue burden or cost. If it is shown that a source of electronically stored information is not reasonably accessible, the requesting party must show that the need for the requested electronic disclosure outweighs the burdens and costs of that disclosure.

13. In resolving disputes concerning the preservation and production of electronically stored information, and the allocation of costs thereof, the arbitral tribunal and parties should balance the need for the requested electronic disclosure against the costs and burdens of that disclosure. In balancing the need, costs and burden of the requested electronic disclosure, the arbitral tribunal and parties may consider, without limitation:
    (a) the specificity of the disclosure request;
    (b) the availability of the information requested from other and more easily accessed sources;
    (c) the importance of the requested disclosure in resolving the issues in dispute;
    (d) the cost and burden of producing the requested electronic disclosure in a reviewable format;
    (e) the importance of the issues and amounts at stake in the arbitration;
    (f) the parties' resources; and
    (g) the parties' reasonable expectations as to the scope of electronic disclosure in the arbitration in light of the parties' respective nationalities and domiciles, the circumstances of the dispute and of the arbitration, and any other relevant circumstances.
14. In determining the relative benefits, costs and burdens of the requested electronic disclosure, including and not limited to what information the sources identified as not reasonably accessible might contain and what costs and burdens searching for and producing such information from the identified sources would entail, the arbitral tribunal may take such measures as it deems appropriate, taking into account any costs and delays such measures may entail. Such measures may include but are not limited to:
    (a) requiring the responding party to conduct a sampling of electronic information contained on the sources identified as not reasonably accessible;
    (b) allowing some form of inspection of such sources;
    (c) allowing the examination of witnesses knowledgeable about the responding party's information systems; and
    (d) designating a tribunal-appointed information systems expert to perform such tasks, analyses and recommendations as the tribunal deems appropriate.
15. The arbitral tribunal may set such conditions on the disclosure of electronically stored information as it deems appropriate. Such conditions may include but are not limited to:

(a) limitations on the amount, type or sources of electronically stored information required to be accessed and produced; and
(b) the payment by the requesting party of part or all of the reasonable costs of obtaining electronically stored information from sources that are not reasonably accessible.

16. The primary source of electronically stored information should be active data and information that is stored in a manner that permits efficient search and retrieval. Resort to less accessible electronically stored information, including but not limited to disaster recovery back-up tapes, should be made only if the need for the requested electronic disclosure outweighs the cost, burden and disruption of retrieving and producing it from those electronic sources.
17. Unless the parties agree or the arbitral tribunal determines otherwise based on special circumstances, (a) metadata and (b) deleted electronically stored information that exists only in fragmented, shadowed or residual form, need not be preserved or produced.
18. Absent special circumstances, the reasonable costs of retrieving and reviewing electronically stored information for production should be borne by the responding party, unless the electronically stored information sought is not reasonably available to the responding party in the ordinary course of business. If the information sought is not reasonably available to the responding party in the ordinary course of business, then, absent special circumstances, the costs of retrieving, reviewing and producing such electronic information should be shifted to the requesting party.

(d) Preservation of Electronically Stored Information

19. The obligation to preserve electronically stored information requires reasonable and good faith efforts to retain information that may be necessary for pending or threatened arbitration. It is unreasonable to expect parties to take every conceivable step to preserve all electronically stored information that may potentially be relevant and necessary in the arbitration.
20. Adverse inferences and other sanctions should only be considered by the arbitral tribunal if it finds that there was a clear duty to preserve, a culpable failure to preserve and produce relevant and necessary electronic documents, and a reasonable probability that the loss of the evidence has materially prejudiced the adverse party.

(e) Privilege and Waiver

21. A responding party should follow reasonable procedures to protect privileges and objections in connection with the production of electronically stored information.
22. Absent special circumstances, an arbitral tribunal should give effect to any agreements made by the parties concerning the assertion and waiver of privileges with respect to the production of electronically stored information.

VII. SEDONA PRINCIPLES FOR ELECTRONIC DOCUMENT PRODUCTION[73]

1. Electronically stored information is potentially discoverable under Fed. R Civ. P 34 or its state equivalents. Organizations must properly preserve electronically stored information that can reasonably be anticipated to be relevant to litigation.
2. When balancing the cost, burden, and need for electronically stored information, courts and parties should apply the proportionality standard embodied in Fed. R P 26(b)(2)(C) and its state equivalents, which require consideration of the technological feasibility and realistic costs of preserving, retrieving, reviewing and producing electronically stored information, as well as the nature of the litigation and the amount in controversy.
3. Parties should confer early in discovery regarding the preservation and production of electronically stored information when these matters are at issue in the litigation and seek to agree on the scope of each party's rights and responsibilities.
4. Discovery requests for electronically stored information should be as clear as possible, while responses and objections to discovery should disclose the scope and limits of the production.
5. The obligation to preserve electronically stored information requires reasonable and good faith efforts to retain information that may be relevant to pending or threatened litigation. However, it is unreasonable to expect parties to take every conceivable step to preserve all potentially relevant electronically stored information.
6. Responding parties are best situated to evaluate the procedures, methodologies, and technologies appropriate for preserving and producing their own electronically stored information.
7. The requesting party has the burden on a motion to compel to show that the responding party's steps to preserve and produce relevant electronically stored information were inadequate.
8. The primary source of electronically stored information for production should be active data and information. Resort to disaster recovery backup tapes and other sources of electronically stored information that are not reasonably accessible requires the requesting party to demonstrate need and relevance that outweigh the costs and burdens of retrieving and processing the electronically stored information from such sources, including the disruption of business and information management activities.

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9. Absent a showing of special need and relevance, a responding party should not be required to preserve, review, or produce deleted, shadowed, fragmented, or residual electronically stored information.
10. A responding party should follow reasonable procedures to protect privileges and objections in connection with the production of electronically stored information.
11. A responding party may satisfy its good faith obligation to preserve and produce relevant electronically stored information by using electronic tools and processes, such as data sampling, searching, or the use of selection criteria, to identify data most likely to contain relevant information.
12. Absent party agreement or court order specifying the form or forms of production, production should be made in the form or forms in which the information is ordinarily maintained or in a reasonably usable form, taking into account the need to produce reasonably accessible metadata that will enable the receiving party to have the same ability to access, search, and display the information as the producing party where appropriate or necessary in light of the nature of the information and the needs of the case.
13. Absent a specific objection, party agreement or court order, the reasonable costs of retrieving and reviewing electronically stored information should be borne by the responding party, unless the information sought is not reasonably available to the responding party in the ordinary course of business. If the information sought is not reasonably available to the responding party in the ordinary course of business, then, absent special circumstances, the costs of retrieving and reviewing such electronic information may be shared by or shifted to the requesting party.
14. Sanctions, including spoliation findings, should only be considered by the court if, upon a showing of a clear duty to preserve, the court finds that there was an intentional or reckless failure to preserve and produce relevant electronic data and that there is a reasonable probability that the loss of the evidence has materially prejudiced the adverse party.